REMARKS

In the Office Action mailed December 12, 2007, claims 1, 2, 4-7 and 9-34 are rejected under 35 U.S.C. 103 as unpatentable over U.S. Patent 6,598,230 (Ballhorn) in view of U.S. Patent 6,637,029 to Maissel, et al. (Maissel) in view of US Patent No. 6,131,086 to Walker, et al. Walker. Claims 35 and 36 were rejected as being unpatentable over Ballhorn in view of Maissel and further in view of US Patent No. 6,374,336 to Peters, et al. (Peters). Claims 1, 2, 4-7 and 9-36 remain pending hereinafter, where claims 1,6, 11, 18, 25 and 29 are the independent claims.

Claims 1, 2, 4-7 and 9-36 patentably distinguish over the prior art because the prior art does not disclose or suggest a video on demand service system and method that includes and generates a display, on a computer display screen, comprising a tree with a plurality of nodes, the display including displaying video use patterns of the customers, where the system administrator of the video-on-demand service configures a <u>video data path</u> to transmit a requested video program from a video server to the customer's video monitor.

Generally, the present invention relates to monitoring or representing aspects of video-on-demand services. In one aspect of the invention, a tree representation is used to provide multilevel information about the video-on-demand system. A display showing a tree having a plurality of nodes is generated, and information about video-on-demand services is embedded in these nodes. The nodes may be embedded, for instance, with information about the equipment used to provide the video-on-demand services, the users, or the video-on-demand programs themselves.

A system administrator of the video-on-demand system interacts with the nodes (comprising the displayed tree) to configure and to monitor the connections between servers of the system and the customers. In particular, when one of the customers requests a video program, the system administrator interacts with the nodes of the display (i) to select one of the servers to provide that requested video program to that one of the customers and (ii) to assign to the one of the customers one or more of a multitude of video data channels to configure a data path between the selected one of the servers and the video monitor of said one of the customers. This configured data path is then used for transmitting the requested video program from the selected one of the servers to the video monitor of the one of the customers for viewing by the customer.

In addition, the display shows video usage patterns of the users. The video-on-demand system administrator uses their usage pattern display to select commercials that are provided with the video program. For example, as discussed on Page 21 of the specification, the mix of commercials can be changed, based on the customer usage pattern display, to have more sports or less sports.

With another aspect of the present invention, a matrix is constructed from a pair of catalogs of elements of a video-on-demand system. Connection representations are formed for at least some of the cells of the matrix, and these connection representations may be used to represent a number of relationships. These connections may be used, for instance, to show relationships between users and presentations, or between the video-on-demand equipment.

The system administrator interacts with the matrix cells to configure and to monitor the connections between the servers and customers of the system. For instance, when one of the customers requests a video program, the system administrator interacts with the cells of the matrix to select one of the servers to provide the requested video program to that one of the customers, and to assign to that customers one or more of a multitude of video data channels to configure a video data path between the selected one of the servers and the video monitor of said one of the customers. This configured data path is then used for transmitting the requested video program from the selected one of the servers to the monitor of said one of the customers for viewing by that customer.

The system administer may also select commercials that are provided with the video program based on a display of the video usage patterns of the users. Here too, for example, the mix of commercials might be changed, depending on that customer usage pattern, to show more sports or less sports.

The prior art of record fails to disclose or suggest the above-described way in which the system administrator interacts with the displayed tree nodes or with the matrix cells to identify and select one or more channels to configure a specified video data path from one of the servers to the video monitor of one of the customers for transmitting the requested video program from that server to that customer for viewing by the customer.

Ballhorn, in contrast to applicants' invention as claimed, discloses a multimedia box network having of a data server and a plurality of multimedia boxes. The network also

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includes at least one management station connected to the data server and to at least one of the multimedia boxes. While Ballhorn indicates that the disclosed network can be used to transmit image data or video data, this reference is primarily directed to distributing music to juke boxes.

At page 3 of the Office Action, the Examiner asserts that Ballhorn discloses a method of providing multilevel information about video-on-demand services, including providing a video-on-demand service system including a multitude of servers for storing video data, a multitude of customers for receiving said video data and viewing said video data on customer video monitors, and a system administrator for configuring and monitoring connections between said servers and said customers, etc.

The Examiner further asserts that Ballhorn discloses generating a display, on a computer display screen, but fails to teach or suggest displaying a tree having a plurality of nodes, including displaying video usage patterns of the customers, but that Maissel describes a subscriber unit for use in a television system including a television system and transmitting apparatus for transmitting program schedule information. The subscriber unit includes a receiving unit for receiving the program scheduling information, a profile storing unit for storing at least one viewer preference profile of at least one television viewer, and intelligent agent for customizing the program schedule information based, at least in part, on the viewer preference profile, to produce a program guide including customized program schedule information, and display apparatus for displaying the program guide.

Maissel does not disclose (at figs. 1, 8-9L, col. 5, line 51-col. 7, line 1+, col. 8, line 39-col. 9, line 1+ and col. 19, line 16-col. 21, line 1+), generating a display, on a computer display screen, of a tree having a plurality of nodes, including displaying video usage patterns of the customer. Moreover, applicants respectfully disagree that the stated reasons asserted for a skilled artisan to know to combine Maissel and Ballhorn is sufficient under the law.

Neither Ballhorn nor Maissel include or teach generating a display, on a computer display screen, of a tree having a plurality of nodes, including displaying video usage patterns of the customer. If the combination would not realize "generating a display, on a computer display screen, of a tree having a plurality of nodes, including displaying video usage patterns of the customer," the skilled artisan would not make the combination to realize such a "display" as claimed. That is, the combination of Ballhorn and Maissel does not realize a display, on a computer display screen, of a tree having a plurality of nodes, including displaying video usage patterns of the customer.

The Examiner continues that Ballhorn teaches embedding in the nodes information about the video-on-demand services provided to said multitude of customers, including the step of said system administrator interacting with said nodes of said display to configure and to monitor the connections between said servers and said customer video monitors, and wherein commercials are provided with the video program, and the commercials are selected based on the displayed video usage patterns. The Examiner then states that Maissel teaches embedding in nodes information about video on demand services provided to the multitude of customers, and where commercials (alert overlays) are provided with the video program, and

the commercials are selected based on the displayed video usage patterns.

Applicants respectfully disagree that it would have been obvious to combine Ballhorn and Maissel, and that the combination would realize a method of providing multilevel information about video-on-demand services including generating a display, on a computer display screen, of a tree having a plurality of nodes, including displaying video usage patterns of the customers and embedding in the nodes information about the video-on-demand services provided to said multitude of customers, including the step of said system administrator interacting with said nodes of said display to configure and to monitor the connections between said servers and said customer video monitors, wherein commercials are provided with the video program, and the commercials are selected based on the displayed video usage patterns.

The Examiner further states that Ballhorn modified by Maissel fails to disclose whereupon receiving a customer request, the system administrator interacts with the nodes of the display (i) to select one of the servers to provide the requested video program to said one of the customers and (ii) to assign to said one of the customers one or more of a multitude of video data channels to configure a video data path between the selected one of the servers and the video monitor of said one of the customers for transmitting the requested video program from said selected one of the servers to the video monitor of said one of the customers for viewing by said one of the customers.

The Examiner then states that Walker's Figs. 1 and 5-11 disclose a method and system

for allowing viewers to purchase program products or services, where a system admin 140 interacts with nodes to select servers and provide a requested program, services or products to the customer, assigns the customer one or more channels, configures a path between selected servers and customers for transmitting requested video programs from a selected server to a video monitor (col. 3, line 6-col. 4, line 21, lines 38-50, col. 5, line 10-col. 6, line 22 and col. 7, line 30-col. 8, line 39).

The Examiner then concludes that the reason the skilled artisan would know to combine Walker with the combination of Ballhorn and Maissel is because combining Walker, Maissel and Ballhorn would allow a system administrator to respond to a customer request and route the service to the right server and channel over appropriate paths.

Applicants respectfully disagree. The missing "wherein" clause states: wherein, when one of the customers requests a video program, the system administrator interacts with the nodes of the display (i) to select one of the servers to provide the requested video program to said one of the customers and (ii) to assign to said one of the customers one or more of a multitude of video data channels to configure a video data path between the selected one of the servers and the video monitor of said one of the customers for transmitting the requested video program from said selected one of the servers to the video monitor of said one of the customers for viewing by said one of the customers.

This wherein clause requires the system administrator to interact with the node of the display. None of the references disclose the tree with a plurality of nodes, so the skilled

artisan would not have thought to make such a combination would not realize a display that displays a tree comprising a plurality of nodes including displaying usage patterns of the customers.

Moreover, Walker discloses a system that allows television viewers to buy products shown on television programs. In this system, a central controller 110 receives product data and entertainment program data from remote terminals 150 and stores this data in a memory. Also, viewer interface 120 transmits a product request to a corresponding interactive voice response Unit (IVRU) 130 and operator terminal 140, each of which may be located in a call service center. By use of Walker, a product request describes a particular product of interest to the viewer, and an operator at operator terminal 140 then transmits program description data corresponding to the request to central controller 110. This controller, after accessing the product and program data stored in its memory, transmits product identification data back to operator terminal 140, and this data are provided to viewer interface 120. If the viewer decides to purchase a product, controller 110 then transmits product order data to vendor facility 160, and this facility routes the purchased product to the viewer.

There is a very important difference between the product distribution procedure shown in Walker, et al and the distribution procedure of the present invention. The Walker, et al. system is used to sell products that are <u>shown in</u> a television program, not the television programs <u>themselves</u>. In the present invention, in contrast, the television programs themselves are sent to the viewers.

Walker does not disclose, teach or even suggest wherein when one of the customers requests a video program, the system administrator interacts with the nodes of the display (i) to select one of the servers to provide the requested video program to said one of the customers and (ii) to assign to said one of the customers one or more of a multitude of video data channels to configure a video data path between the selected one of the servers and the video monitor of said one of the customers for transmitting the requested video program from said selected one of the servers to the video monitor of said one of the customers for viewing by said one of the customers.

Independent claims 1, 6, 11, 18, 25 and 29 clearly describe this difference between the present invention and the prior art.

Specifically, claims 1, 6, 11 and 29 describe the feature that the system administrator interacts with the nodes of the tree display, when one of the customers requests a video program, (i) to select one of the servers to provide the requested video program to that one of the customers and (ii) to assign to the one of the customers one or more of a multitude of video data channels to configure a video data path between the selected one of the servers and the video monitor of said one of the customers, where this channel is then used for transmitting the requested video program from the selected one of the servers to the video monitor of said one of the customers for viewing by that customer.

Claims 18 and 25 indicate that, when one of the customers requests a video program, the system administrator interacts with the matrix module or the matrix cells (i) to select one

of the servers to provide the requested video program to that one of the customers and (ii) to assign to the one of the customers one or more of a multitude of video data channels to configure a video data path between the selected one of the servers and the video monitor of said one of the customers, where this channel is then used for transmitting the requested video program from the selected one of the servers to the video monitor of said one of the customers for viewing by that customer.

The other references of record have been reviewed, and these other references, whether considered individually or in combination, also do not disclose or suggest this feature of the present invention.

Because of the above-discussed differences between Claims 1, 6, 11, 18, 25 and 29 and the prior art, and because of the advantages associated with those differences, these claims 1, 6, 11, 18, 25 and 29 patentably distinguish over the prior art and are allowable. claims 2, 4, 5 and 34 are dependent from claim 1 and allowable therewith; claims 7, 9 and 10 are dependent from claim 6 and allowable therewith; and claims 12-16 are dependent from, and allowable with claim 11. In addition, claims 19-23 are dependent from, and allowable with, claim 18; claims 26-28 are dependent from claim 25 and allowable therewith; and claim 30 is dependent from, and allowable with claim 29. Also, claims 17, 24 and 31 incorporate by reference, and are allowable with, claims 1, 18 and 30 respectively. Claims 31-33 are dependent from claim 30 and are allowable therewith.

Claims 35 and 36 were also rejected under 35 U.S.C. 103 as unpatentable over

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Ballhorn, Maissel and Walker, further in view of US Patent No. 6,374,336 to Peters, et al. (Peters). The Examiner asserts that Ballhorn, Maissel and Walker are properly combined and teach the limitations of independent claim 18, including an intersection matrix, that the asserted combination fails to teach different servers for each category, that Peters' Figs. 1 and 5-7 describe a system and process for transferring multiple streams of data stored on multiple storage units, and a catalog manager that stores on different storage units different catalogs and transfers multiple streams of the catalogs (col. 6, line 51-col. 7, line 13; col. 8, line 19-57 and col. 11, line 56-col. 12, line 1+). The Examiner then concludes that it would have been obvious to one of ordinary skill in the art to incorporate the teaching of Peters into the asserted combination of Ballhorn, Maissel and Walker to provide storage for different catalogs to allow a distributor to access the storage with the shortest queue of requests and efficient stream multiple or different catalogs simultaneously.

Applicants respectfully disagree that the combination of Ballhorn, Maissel and Walker teach the method of independent claim 18, including the display screen displaying the tree with nodes showing customer patterns of usage, and that combining Ballhorn, Maissel and Walker with Peters and realize storage for different catalogs to allow a distributor to access the storage with the shortest queue of requests and efficient stream multiple or different catalogs simultaneously, as claimed.

Peters, et al. describes a procedure for transferring multiple high bandwidth streams of data between multiple storage units. The Examiner cited Peters for its disclosure of storing different catalogs in different storage units. There is no disclosure or suggestion in Peters
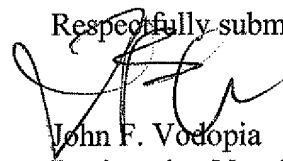
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though, of enabling the administrator of a video-on-demand system to configure and to monitor customer connections by interacting with displayed tree nodes or matrix cells. Hence the combination of Ballhorn, Maissel, Walker and Peters does not realize the inventions of claims 35 and 36, for at least the reasons set forth above for the patentability of independent claim 18, and applicants respectfully request that the rejection of claims 35 and 36 be withdrawn.

Conclusion

The Examiner is thus respectfully requested to reconsider and to withdraw the rejection of claims 1, 2, 4-7 and 9-36 under 35 U.S.C. §103, and to allow these claims in view of Ballhorn, Maissel and Walker with Peters in any combination.

If the Examiner believes that a telephone conference with Applicants' Attorneys would be advantageous to the disposition of this case, the Examiner is asked to telephone the undersigned.

Respectfully submitted,

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